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TITLE : MANUFACTURE OF THIN FILM SOLAR BATTERY

ABSTRACT : PURPOSE: To enable to form an excellent amorphous silicon film by a method wherein a polyethylene telephthalate film, having the heat shrinkage factor less than the prescribed value, is used as a substrate.

CONSTITUTION: A substrate is formed using a polyethylene telephthalate film having the omnidirectional heat shrinkage factor of 3% or below at 200°C for 1hr and the density of 1.399g/cm³ or above as the conditions required for the substrate immediately before formation of an amorphous silicon film by laminating a film to be used for electrode, and an amorphous silicon film is formed. The polyethylene telephthalate film having the above-mentioned characteristics can be obtained by performing a heat treatment at 210°C~250°C for 20sec~5min. Said heat treatment is performed after the four corners of the film have been fixed or a forward tension is applied using feed-roller and take-up roller while a tenter is used for fixing in width direction. No solvent or absorbed water is discharged or no cracks are generated when an amorphous silicon film is laminated in the case of the thin film solar battery using the above-mentioned film.

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